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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/843,814	04/30/2001	Raghunath Vitthal Chaudhari	109422	9947

25944 7590 09/09/2003

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EXAMINER

PASTERCZYK, JAMES W

ART UNIT	PAPER NUMBER
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1755

DATE MAILED: 09/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

AS-10

Office Action Summary

Application No.
09/843,814

Applicant(s)
Chaudhari et al.

Examiner
J. Pasterczyk

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 4/30/01 and 9/18/01
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-63 and 88-110 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-63 and 88-110 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on Apr 30, 2001 is/are a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 4 6) ☐ Other:

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1. This Office action is in response to the letter and preliminary amendment of 8/9/02 and 4/30/01 respectively. The examiner notes that following the election claims 1-63 and 88-110 are the remaining claims left uncanceled and thus are the ones under consideration.

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

3. Figure 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance. In fact, it does not appear as if anything novel or unobvious is illustrated in any of the figures; if this is not so, applicants are requested to point out which figure contains such matter as well as what that matter is.

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: feature g in figure 3 is not found in the specification. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: feature B in figure 4 is

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mentioned in the specification but is not in the figure; the specification mentions a collection arm for figure 5, but such feature does not appear to exist in the figure; the specification mentions features e and g in figure 6, but no such features are found. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

6. The drawings are objected to because in figures 3 and 4 the coefficient on N2 should be subscripted. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

7. The abstract of the disclosure is objected to because it uses such prolix and incomprehensible terms as "practically insoluble", "formulate", "negatively charged" where the proper term is --anionic--, and there are many grammatical errors in the abstract, including run-on sentences and missing conjunctions. Correction is required. See MPEP § 608.01(b).

8. The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

9. The instant specification, including the claims, is indefinite, confusing, and written in improper English such that it is not clear what is being claimed. Applicant is required to submit an amendment which clarifies the specification so that the examiner may make a proper comparison of the invention with the prior art.

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Applicant's amendment should be a wholesale revision of the specification and should be accompanied with a statement stating that the specification contains no new matter (i.e. matter which is not supported by the disclosure as originally filed).

It is the function of the examiner to construe the claims presented; *In re Volk*, 207 USPQ 1086. If the claims are subject to more than one interpretation, and one interpretation would render the claims unpatentable over the prior art, then the proper course is to make a rejection under 35 USC 112, second paragraph as well as the prior art; *ex parte Ionescu*, 222 USPQ 537.

It is anticipated that the next Office action will be final. Given the breadth of the claims, however, an election of species may be appropriate.

10. Claims 1-63 and 88-110 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 110 provides for the use of a catalyst, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 110 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex*

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parte Dunki, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Further in claim 110, in l. 2 the phrase "selected from" should trigger the remaining closed Markush language followed by a Markush group, yet what is further recited is "analogous reactions" which begs the question of "analogous to what?" The articles "a" and "the" are missing from before "catalytically active" and "liquid" respectively, "selected from" appears again in l. 3, the wrong conjunction for a closed Markush group is used in l. 4, it is not clear what is meant by a "quaternary compound", in l. 5 it is not clear that "metal complexes" refers to those of l. 3 or all those of l. 3-4, in l. 7 an indefinite article should precede "catalytic metal atom or ion", a term which itself does not appear to really limit the claim since nearly every metal atom or ion is capable of catalyzing some reaction, and the remainder of l. 7 is confusingly worded so that it is not clear what is being claimed. If the metal atoms of l. 8 are a closed Markush group, then the proper language should be used to introduce such a group, and the Roman numeral terminology has been superceded by the newer, less ambiguous use of Arabic numerals. In l. 9 "and" should be "or" for proper closed Markush language, and it does not seem possible that L can actually be a separate compound capable of independent existence since it is bonded to M in some manner. The list of atoms and groups in l. 9-10 is not of radicals but of atoms, molecules, or groups since there are no entities there having clearly unpaired electrons or an odd number of electrons; further in l. 10 insert "an" before "oxy", and in l. 11 the proper spelling is "alkoxy" and "aryloxy", plus add "or" before "cycloalkyl" for a closed Markush group and "group" after "cycloalkoxy" since

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these are chemical groups or moieties and the grammar otherwise is incorrect. Further in l. 11 after "selected from" insert "the group consisting of" for proper closed Markush terminology, and add indefinite articles before the members of the group. Again, in l. 12-13 the moieties recited are not radicals, l. 14 has the same problems as l. 11, "quaternary ammonium compound" lacks antecedent basis, if Y is P or As the compound is not ammonium, and if Y is S the compound is not even quaternary, the symbol Y already means yttrium, which would conflict with the use of a group 3 metal in the metal complex, l. 18 has the same misspellings as l. 11, the Markush group for R* lacks proper language for a closed Markush group as does that for Z, and some kind of punctuation should separate the Z Markush group from the R* Markush group.

Many of the problems noted above for claim 110 also exist in independent and dependent claims 53-63 and 88-109; there are simply too many to list. Wholesale revision of all the claims is clearly called for.

For example, in claim 106 the phrases "catalytic formulation (sic)", "comprising of (sic) tumbling solid support in the (sic) rotating pan under current (sic) of gasses (sic)", "in such a way", "support is mechanically robust and thermally stable solid (sic)", "pallets (sic)", "at least two or more (sic)" are found, as well as nearly all of the problems noted above for claim 110. This claim as well as independent claims 103, 98, 93, 88, 59 and 53 as well as the aforementioned claim 110 are all highly narrative and thus incomprehensible.

Independent claims 1 and 30 suffer from excessive broadness that leads to lack of proper enablement commensurate in scope with their recitations. For instance, in claim 1 "novel" is yet

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to be determined and is for the examiner to determine, “practically insoluble (sic) in a variety of liquid media (sic)” is essentially meaningless since solubility depends on the solvent used and no guidance is given as to what solvents may actually dissolve this material, “the said solid material” lacks antecedent basis, and no counterions are recited, though they would be necessary to balance the charge of the “catalytically active entities”, which begs the question of toward what reactions these entities are catalytically active, as well as just what these entities consist of. In claim 2 “molecularly well defined” seems to have no clear meaning. The other dependent claims are rife with phrases lacking positive antecedent basis, e.g. claim 3 “catalytically active entity” is not the same as “catalytically active anionic entity” of claim 1 from which it depends, and in e.g. claim 6 “the porous solid support” lacks positive antecedent basis since the support is not recited earlier as being porous. Problems noted for claim 110 above are found in the dependent claims to claim 1, e.g. in claims 20, 21 and 25. Claim 30 is overbroad in that it lacks recitation of what the actual identities of the “catalytically active” and “catalytically inactive” entities are, as well as suffering problems noted above for claim 1. Again, the dependent claims from claim 30 suffer from numerous formal problems including the antecedent basis problems noted above for claims 3 and 6. Wholesale revision of all the claims is clearly called for.

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 1-63 and 88-110 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuntz, USP 4,248,802 (hereafter referred to as Kuntz) in view of Davis et al., USP 4,994,427 (hereafter referred to as Davis).

Kuntz discloses the invention substantially as claimed (col. 3, l. 1-51; col. 4, l. 36-39, l. 52-69).

Kuntz lacks disclosure of the compound being supported on a solid support.

However, Davis teaches that such a compound may be supported on a solid support (col. 2, l. 33-35, l. 55-57; col. 3, l. 36 to col. 4, l. 9; col. 4, l. 35-66; examples).

It would have been obvious to one of ordinary skill in the art to apply the teaching of Davis to the disclosure of Kuntz with a reasonable expectation of obtaining a highly-useful catalyst and method of making it with the expected benefit of the catalyst being usable in slurry phase and gas phase catalytic reactions.

13. None of the material relating to applicants' computerized search for this application has been made of record since it has not been submitted in an IDS.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. Pasterczyk whose telephone number is (703) 308-3497. The examiner can normally be reached on M-F from 9 to 5:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Bell, can be reached on (703) 308-3823. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Mark L. Bell
Supervisory Patent Examiner
Technology Center 1700



J. Pasterczyk

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